

MINUTES OF THE HOUSE TAXATION COMMITTEE.

The meeting was called to order by Chairperson John Edmonds at 9:00 a.m. on March 14, 2003 in Room 519-S of the Capitol.

All members were present except: Representative Nancy Kirk
Representative Bonnie Sharp

Committee staff present: Chris Courtwright, Legislative Research Department
Gordon Self, Office of the Revisor of Statutes
Carol Doel, Committee Secretary

Conferees appearing before the committee: Dr. Doug Houston, University of Kansas School of
Business

Others attending: See attached list

Chairman Edmonds called for bill introductions. Hearing none, he introduced Dr. Doug Houston, University of Kansas School of Business who gave a presentation on "*Economic Modeling of Sales Tax Exemptions*" This is known as Kansas-STAMP (State Tax Analysis and Modeling Program) which is a general equilibrium tax model. This was formulated by The Beacon Hill Institute at Suffolk University. The proper tool to provide the required level of detail and to analyze sweeping changes in the tax system is a *Computable General Equilibrium* (CGE) model. A CGE tax model is a formal description of the economic relationships among Kansas producers, households, government and the rest of world. (Attachment 1)

Also included in his presentation was an article on the background of Kansas STAMP. The Kansas STAMP was built with a basic structure similar to that of the California model of Berck et al, because it was designed for a similar purpose, namely tax policy analysis. The Kansas model is also similar in structure to the CGE (Computable General Equilibrium) models that the Beacon Hill Institute has built for Texas, Alabama and Wisconsin and is now completing for Florida, Illinois, and Massachusetts. (Attachment 2)

With no further business before the committee, Chairman Edmonds adjourned the meeting at 10:10 a.m.

HOUSE TAXATION COMMITTEE

GUEST LIST

DATE March 14, 2002

NAME	REPRESENTING
<i>George & Ethel</i>	NTN
Doug Houston	Flint Hill Center for Public Policy
Scott Anglemeyer	KDOCH
Bob Corkins	KLEAR Inc.
George Pearson	Flint Hills Institute
Hans Lenz	Ks Assn of Broadcasters
Janet McPherson	Ks Farm Bureau
Rhonda Hubert	K106A
Kevin Bruce	Hess Law Firm
Bill Henry	KCUA
Mark Leonard	Kowalski, Inc.
Leslie Kaufman	KFB

Kansas-STAMP: A General Equilibrium Tax Model



David G. Tuerck, PhD
John S. Barrett, MS
Sorin Codreanu, MS

The Beacon Hill Institute
At Suffolk University

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House Taxation
Attachment 1
Date 3-14-03

EXECUTIVE SUMMARY

The effects that tax rate changes have on taxable activities are real and can be quantified. Economic evidence indicates that state-level tax increases have significant negative effects on state economic activity.¹ Quantifying these negative effects, however, is difficult and requires the construction and use of a model of the state tax system.

The proper tool to provide the required level of detail and to analyze sweeping changes in the tax system is a *Computable General Equilibrium* (CGE) model. We have constructed a CGE model of Kansas (Kansas-STAMP). This report explains the concept behind the CGE model, sets out the individual components, and then uses this model to consider raising additional revenue.

A CGE tax model is a formal description of the economic relationships among Kansas producers, households, government and the rest of the world. It is general in the sense that it takes all the important markets and flows into account. It is an equilibrium model because it assumes that demand matches supply in every market (goods and services, labor and capital); this is achieved by allowing prices to adjust within the model (i.e. they are endogenous). It is computable because, with the help of a computer, it can be used to generate numerical solutions to concrete policy and tax changes. And it is a tax model because it pays particular attention to identifying the role played by different taxes.

To provide the level of intricate detail that makes a CGE model so useful, it is necessary to create economic *sectors*; Kansas-STAMP has 76 economic sectors. Each sector is an aggregate that groups together segments of the economy. We separate households into five income classes and firms into 29 industrial sectors. In addition, we distinguish between 17 types of taxes (ten of them at the state level) and 20 categories of government spending. To complete the model there are two factor sectors (labor, capital), an investment sector, a Kansas “general fund” sector, a sector for the rest of the United States and a sector that represents the rest of the world.

In this report we consider the effects of raising the state income tax by one percentage point in all tax brackets. When this change is entered into Kansas-STAMP, the results reveal the negative

¹ Timothy J. Bartik, *Who Benefits from State and Local Economic Development Policies?* (Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research, 1991).

effects the tax change would have on the Kansas economy. In other words, *the case for raising the personal income tax in Kansas is not economically viable.*

Looking at the results of this simulation in Table A below, the first point to note is that the increase in the state income tax leads to an increase in the wage rate of 0.56%. This does not necessarily leave workers better off; it occurs because workers expect to be compensated for the increase in the income tax that they now have to pay.

The higher wage rate in turn leads firms to cut back the number of workers they employ, causing employment to fall by 5,211. This represents a reduction of 0.35% in the number employed in Kansas. Despite the drop in employment, net migration is slightly positive, due to an increase in lower income households receiving higher transfer payments as a result of the additional revenue from the tax increase.

Table A		
Simulation Results of Increasing the State Income Tax by one percentage point		
	Estimated 2004	Proposed 2004
Employment		
Number employed	1,489,472	1,484,261
Change in labor	-	(5,211)
Change in labor relative to baseline (%)	-	(0.35)
Gross wage rates		
Baseline wage rate, \$/person/yr, nominal \$	31,327	31,503
Change in wage rate, nominal \$	-	176
Change in wage rate relative to baseline (%)	-	0.56
Investment		
Baseline investment, \$m, nominal \$	12,845	12,828.093
Change in nominal investment (\$m)	-	(17.261)
Change in capital stock relative to baseline (%)	-	(0.13)
Gross State Product, real		
GSP (\$bn)	78.972	78.708
Change in real GSP (\$bn)		(0.264)
Change in real GSP (%)		(0.33)
Gross State Product per capita, real		
GSP/capita (\$)	28,714	28,610
Change in real GSP/capita (\$)		(104)
Change in real GSP/capita (%)		(0.36)
Disposable Income, real		
DI (\$bn)	64.743	64.614
Change in real DI (\$bn)		(0.129)
Change in real DI (%)		(0.20)
Disposable Income per capita, real		
DI/capita (\$)	23,541	23,487
Change in real DI/capita (\$)		(54)
Change in real DI/capita (%)		(0.23)

The higher wage rate also prompts firms to spend more on investment. They are in effect replacing (expensive) labor with machines. The net effect of less labor, even with more capital, is to reduce the output of goods and services produced in Kansas. Thus real gross state product would decrease by 0.33%.

Alternatively one might look at real disposable income, which is earnings plus transfers (such as pensions) less taxes paid, adjusted for any change that occurs in the price level. Total real disposable income in Kansas would decrease by 0.20%, while per capita real disposable income would shrink by 0.23%. These results provide no justification for a change in the personal income tax.

5. Increasing the State Income Tax

Kansas is deriving most of its revenue from two main sources: sales tax and personal income tax. In order to balance its budget for the next fiscal year, Kansas might consider several choices of tax increases. The proponents of an income tax increase would argue that, unlike the sales tax, it could be designed to weigh more heavily on upper-income households, those they assume can afford it. They also point out that a state income tax may be deducted from income before computing Federal income tax, for households that itemize their Federal tax returns; by reducing the net tax payments to the Federal government Kansas would in effect be a beneficiary.

Income taxes also have their opponents, who emphasize the deterrent effect of high marginal tax rates. Suppose a rise in the income tax. If gross (i.e. pre-tax) wages do not rise, then the tax increase lowers the take-home pay of workers, and will deter some people from working, or from moving to Kansas to work. If gross wages do rise, then the cost of employing labor will be higher, and so businesses will cut back on the number of workers they employ. Either way, state output will fall, and this may not offset the benefit of paying less tax to the Federal government.

Ultimately the debate about the desirability of an income tax increase cannot be settled by invoking theoretical or even moral arguments, because it is largely an empirical issue. Methodologically, the solution to address the issue is to use a Computable General Equilibrium model; it is straightforward to simulate an income tax increase and trace through the effects on the economy.

Consider the effects of increasing the state income tax by 1 percentage point, to be levied on all five income groups considered.

When we enter these changes into Kansas-STAMP, and compare the new results with the baseline situation, the conclusion that emerges is that while in terms of revenue it would collect the entire extra amount, it will have, as expected, a negative effect on the state economy.

Having stated the conclusion, we need to turn to the detailed results. The key findings are set out in Table 6. The first point to note is that the increase in the state income tax leads to an increase in the nominal wage rate of 0.56%. This does not necessarily leave workers better off; it occurs

because workers expect to be compensated for the increase in the income tax that they now have to pay.

The higher wage rate in turn leads firms to cut back the number of workers, so employment falls by 5,211. This represents a reduction of 0.35% in the number employed in Kansas.

There is also a negative effect on the investment of about 0.13%. The net effect of less labor, capital, is to reduce the output of goods and services produced in Kansas. Thus real Gross State Product would decrease by 0.33%. Real GSP *per capita* would decrease by a slightly larger amount (it falls by 0.36%).

Alternatively one might look at real disposable income, which is earnings plus transfers (such as pensions) less taxes paid, adjusted for any change that occurs in the price level. Total real disposable income in Kansas would decrease by 0.23%. These results provide insight into the detrimental economic effects of state tax increases.



Memo

To: George Pearson, Flint Hills Center for Public Policy

From: David G. Tuerck, Beacon Hill Institute at Suffolk University

Date: January 24, 2003

Re: Background of Kansas STAMP®

Kansas STAMP® is a large and sophisticated model that is designed primarily to determine the economic effects of changes in state-level taxes and expenditures. For instance, it can show the effect of a change in the state income tax on such variables as employment, income distribution, wage rates, tax revenue, and population in Kansas.

✓ Kansas STAMP is a Computable General Equilibrium (CGE) tax model. As such, it is a formal description of the economic relationships among producers, households, government and the rest of the world. It is general in the sense that it takes all the important markets and flows into account. It is an equilibrium model because it assumes that demand equals supply in every market (goods and services, labor and capital); this is achieved by allowing prices to adjust within the model (i.e., they are endogenous). It is computable because it can be used to generate numeric solutions to concrete policy and tax changes, with the help of a computer. And it is a tax model because it pays particular attention to identifying the role played by different taxes. Shoven and Whalley (1984) give a good early review of CGE models; a fuller treatment appears in Shoven and Whalley (1992).

Although simpler “partial equilibrium” models can be used to analyze tax changes, the advantage of a CGE model is that it enables one to think through all the important effects, and to quantify them. For instance, an increase in the sales tax will typically lead to an increase in the (nominal) wage rate; this effect is not picked up in simpler models of the effects of tax changes. Shoven and Whalley (1992) argue that “the virtue of using applied general equilibrium models is that, once constructed, they yield a facile tool for analysing a wide range of possible policy changes ...there will be situations in which the modeler and those involved in the policy decision process will have gained new perspectives as a result of using the model.”

Kansas STAMP has 76 sectors in total. Each sector is an aggregate that groups together segments of the economy. We separate households into five income classes and firms into 29 industrial sectors. In addition, we distinguish between 17 types of taxes (ten of them at the state level) and 20 categories of government spending. To complete the model there are two factor sectors (labor, capital), an investment sector, a Kansas “general fund” sector, a sector for the rest of the United States, and a sector that represents the rest of the world. The choice of sectors was dictated by the availability of suitably

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disaggregated data (for households and firms), and the purposes of the model, which is why we provide considerable detail about taxes.

Kansas STAMP is a regional CGE model. Although several regional CGE models have been built – Partridge and Rickman (1998) review 18 models applied to states or regions of the United States – very few provide enough disaggregation of state and local taxes and spending to be useful for policy purposes.

An important exception is the California model of Berck et al. (1996), which was commissioned by California to provide a tool for “dynamic” revenue analysis; Senate Bill 1837, approved by Governor Pete Wilson in August 1994, states, “the Legislature intends that dynamic estimating techniques be used in estimating the state fiscal impact of proposals to change those laws.” Dynamic revenue analysis takes into account the behavioral response of firms and households to changes in taxes; for instance, a static analysis would predict that if income tax rates were doubled then revenue would double too, whereas a dynamic analysis would recognize that people would change their behavior and that revenue would not double in this case. Dynamic revenue analysis requires the use of a CGE model (e.g. Berck and Dabalén 1995).

Kansas STAMP was built with a basic structure similar to that of the California model of Berck et al. (1996), because it was designed for a similar purpose, namely tax policy analysis. The California model also served as the foundation for a tax-oriented CGE model of Nebraska (Calvert, Cho and Yelick 2001) that was developed by the legislative fiscal office of the state legislature.

The Kansas model is also similar in structure to the CGE models that the Beacon Hill Institute has built for Texas (Tuerck et al. 2002a), Alabama (Tuerck et al. 2003) and Wisconsin (Tuerck et al. 2002b, Beacon Hill Institute 2002) and is now completing for Florida, Illinois, Massachusetts, and elsewhere. The Texas STAMP model has been subject to expert review; Holloway (2002) writes, “the Texas CGE-STAMP model makes a major contribution to capturing the dynamics of tax policy changes because it incorporates the expected effects on producer and consumer behavior that simpler models ignore.” Wisconsin STAMP is being used to contribute to the current debate about tax policy there; Lank (2003) provides a recent example of its use.

References

- Beacon Hill Institute. 2002. Raising Taxes in Wisconsin: Measuring the Full Costs. Beacon Hill Institute, Boston MA.
- Berck, P, E. Golan, B. Smith, J. Barnhart and A. Dabalén. 1996. *Dynamic Revenue Analysis for California*, California Department of Finance, Sacramento CA.
- Berck, Peter and Andrew Dabalén. 1995. *A CGE Model for California Tax Policy Analysis: A Review of Literature*, Department of Agricultural and Resource Economics, University of California Berkeley, CA.
- Calvert, Michael, Iksoo Cho and Don Yelick. 2001. *Dynamic Tax Revenue Analysis in Nebraska (Dynamic TRAIN)*, Legislative Fiscal Office, Nebraska State Legislature.
- Holloway, Milton. 2002. A Review of Texas CGE-STAMP: A General Equilibrium Tax Model for Texas, Resource Economics, Inc., Austin TX.

- Lank, Avrum. 2003. "Raising taxes would kill thousands of jobs," *Milwaukee Journal Sentinel*, January 21, 2003.
- Partridge, Mark and Dan Rickman. 1998. "Regional Computable General Equilibrium Modeling: A Survey and Critical Analysis," *International Regional Science Review*, 21(3): 205-248.
- Shoven, John and John Whalley. 1984. "Applied General-Equilibrium Models of Taxation and International Trade: An Introduction and Survey," *Journal of Economic Literature*, 22: 1007-1051.
- Shoven, John and John Whalley. 1992. *Applying General Equilibrium*, Cambridge University Press, Cambridge UK.
- Tuerck, David, Jonathan Haughton, Vadym Slobodyanyuk and Sorin Codreanu. 2002a. Texas CGE-STAMP: A General Equilibrium Tax Model for Texas. Beacon Hill Institute, Boston MA.
- Tuerck, David, Jonathan Haughton and John Barrett. 2002b. Wisconsin's Budget Woes: A Solution in Retrospect. Beacon Hill Institute, Boston MA.
- Tuerck, David, Jonathan Haughton, John Barrett and Sorin Codreanu. 2003. Tax Changes In Alabama: Giving Back to Families. Beacon Hill Institute, Boston MA.

KANSAS CGE STAMP

Instructions: Change numbers in bright yellow cells only.

Updated March 4th, 2002

Beacon Hill Institute. (617) 573 8750.

[Jump to See Results](#)

Sales and Use Tax	Actual FY 2001	Actual FY 2002	Estimated FY 2003	Estimated FY 2004	Proposed FY 2004
Statutory rates as % of sales	4.90%	4.90%	5.30%	5.30%	5.30%
Desired change in statutory rate (%), or					-0.40%
Revenue from tax (\$m, current)	1,748	1,796	1,930	1,980	1,831
Desired change in revenue (\$m, current)					-

Changing the Sales tax base	Actual FY 1999	Actual FY 2000	Estimated FY 2001	Estimated FY 2002	Proposed FY 2002
Desired change in the sales base, by industry :					% to be taxed
Agriculture forestry and fishing					100%
Mining					100%
Construction					100%
Food and food processing					100%
Alcohol					100%
Apparel and clothing					100%
Building materials and furniture					100%
Paper and publishing					100%
Chemicals rubber plastics					100%
Petroleum refining					100%
Electronic and electrical equipment					100%
Motor vehicles					100%
Aircraft and space industry					100%
Other manufacturing					100%
Transportation					100%
Communications					100%
Electricity gas sanitary					100%
Wholesale trade					100%
Retail trade					100%
Banking					100%
Insurance					100%
Real estate					100%
Personal services					100%
Repair services					100%
Business services					100%
Hotels amusements entertainment					100%
Health services					100%
Education services					100%
Other services					100%

Corporate Income Tax	Actual FY 2001	Actual FY 2002	Estimated FY 2003	Estimated FY 2004	Proposed FY 2004
Effective tax rate (%)	1.49%	1.49%	1.49%	1.49%	1.49%
Desired change in rate (%), or					0.00%
Revenue from tax (\$m, current)	281	168	228	253	253
Desired change in revenue (\$m, current)					-

Motor Fuel Tax	Actual FY 2001	Actual FY 2002	Estimated FY 2003	Estimated FY 2004	Proposed FY 2004
Effective tax rate (%)	14.14%	15.34%	15.95%	17.46%	17.46%
Statutory rate \$/gal.	\$0.21	\$0.21	\$0.21	\$0.23	\$0.23
Desired change in statutory rate, \$/gal.					\$0.00
Desired change in effective rate (%), or					0.00%
Revenue from tax (\$m, current)	365	370	374	384	384
Desired change in revenue (\$m, current)					-

Mineral Tax	Actual FY 2001	Actual FY 2002	Estimated FY 2003	Estimated FY 2004	Proposed FY 2004
Effective tax rate (%)	3.70%	4.54%	4.54%	4.54%	4.54%
Desired change in rate (%), or					0.00%
Revenue from tax (\$m, current)	109	82	85	83	83
Desired change in revenue (\$m, current)					-

Cigarette Tax	Actual		Estimated		Proposed
	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004
Statutory rate \$/pax	\$ 0.24	\$ 0.70	\$ 0.70	\$ 0.79	\$ 0.79
Desired change in statutory rate, \$/pax					\$ -
Revenue from tax (\$m, current)	49	48	132	145	145
Desired change in revenue (\$m, current)					-

State personal income tax	Actual		Estimated		Proposed
	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004
Marginal tax rates					
Up to \$25,000	3.50%	3.50%	3.50%	3.50%	3.50%
\$25,001 - \$50,000	3.50%	3.50%	3.50%	3.50%	3.50%
\$50,001 - \$75,000	6.25%	6.25%	6.25%	6.25%	6.25%
\$75,001 - \$100,000	6.45%	6.45%	6.45%	6.45%	6.45%
Over \$100,000	6.45%	6.45%	6.45%	6.45%	6.45%
or:					
Revenue from tax (\$m, current)	2,224	2,057	2,073	2,158	2,158
Desired change in revenue (\$m, current)					-
New (static) revenue from tax (\$m)	2,224	2,057	2,073	2,158	2,158

Local property tax: residential	Actual		Estimated		Proposed
	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004
Effective tax rate (%)	1.546%	1.546%	1.546%	1.546%	1.546%
Desired change in rate (%), or					0.00%
Revenue from tax (\$m, current)	1,485	1,621	1,768	1,793	1,793
Desired change in revenue (\$m, current)					-

Local property tax: business	Actual		Estimated		Proposed
	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004
Effective tax rate (%)	3.011%	3.011%	3.011%	3.011%	3.011%
Desired change in rate (%), or					0.00%
Revenue from tax (\$m, current)	1,063	1,130	1,201	1,226	1,226
Desired change in revenue (\$m, current)					-

Results of the simulation	Estimated		Proposed		Results of the simulation	Proposed
	2004	2004	2004	2004		2004
Employment	jobs	jobs			Decomposing effects of changes	\$m
Number employed	1,489,472	1,491,354			Change in Kansas State tax revenue	(139.94)
Change in labor	-	1,883			of which:	
% change in labor relative to baseline	-	0.13%			Sales Tax	(142.94)
					Corporate Income tax	0.22
					Motor fuels tax	(0.02)
					Motor vehicle tax	0.01
					Mineral tax	0.08
					State personal income tax	1.96
					State cigarette and tobacco tax	0.75
					Change in taxes at the local level	10.32
					of which:	
					Local residential property tax	0.66
					Local business property tax	1.60
					Local other taxes	8.06
					Total tax change (state + local)	(129.62)
Gross wage rates	\$/wk/yr	\$/wk/yr				
Baseline wage rate, \$/person/yr, nominal \$	31,327.42	31,323				
Change in wage rate, nominal \$	-	-5				
% change in wage rate relative to baseline	-	-0.02%				
Investment	\$m	\$m				
Baseline investment, \$m, nominal \$	12,845.354	12,854.007				
Change in nominal investment (\$m)	-	8.653				
% change in capital stock relative to baseline	-	0.07%				
Gross State Product, real	\$bn	\$bn				
GSP (\$bn)	78.972	79.125				
Change in real GSP (\$bn)	-	0.153				
% change in real GSP	-	0.19%				
Gross State Product per capita, real	\$	\$				
GSP/capita (\$)	28,714	28,776				
Change in real GSP/capita (\$)	-	62				
% change in real GSP/capita	-	0.22%				
Disposable Income, real	\$bn	\$bn				
DI (\$bn)	64.743	64.740				
Change in real DI (\$bn)	-	-0.003				
% change in real DI	-	0.00%				
Disposable Income per capita, real	\$	\$				
DI/capita (\$)	23,541	23,545				
Change in real DI/capita (\$)	-	4				
% change in real DI/capita	-	0.02%				

The effects of changes in tax structure in the state of Kansas, 2004

Explanation	Units	Indicator	TODAY	CHANGE	Difference	% Difference
Labor and Employment						
State population	m	POPULAT	2.750287	2.749694	(0.000593)	-0.02%
Households	m	HHTOTALS	1.091196	1.090960	(0.000235)	-0.02%
Working households	m	HWTOTALS	0.948033	0.949232	0.001198	0.13%
Non-working households	m	HNTOTALS	0.143163	0.141729	(0.001434)	-1.00%
Employment	m	LD	1.489472	1.491354	0.001883	0.13%
State population, <\$25,000 income	m	POPLE25	1.391276	1.389484	(0.001792)	-0.13%
State population, \$25,000-49,999 income	m	POP25UP	0.677463	0.677826	0.000363	0.05%
State population, \$50,000-74,999 income	m	POP50UP	0.362373	0.362743	0.000371	0.10%
State population, \$75,000-99,999 income	m	POP75UP	0.160286	0.160468	0.000182	0.11%
State population, \$100,000 income and up	m	POP100UP	0.158889	0.159172	0.000283	0.18%
Working households, <\$25,000 income	m	HWLE25	0.479405	0.479513	0.000108	0.02%
Working households, \$25,000-49,999 income	m	HW25UP	0.229444	0.229846	0.000402	0.18%
Working households, \$50,000-74,999 income	m	HW50UP	0.126389	0.126713	0.000323	0.26%
Working households, \$75,000-99,999 income	m	HW75UP	0.055500	0.055656	0.000156	0.28%
Working households, \$100,000 income and up	m	HW100UP	0.057295	0.057504	0.000209	0.36%
Total households, <\$25,000 income	m	HHLE25	0.551998	0.551288	(0.000711)	-0.13%
Total households, \$25,000-49,999 income	m	HH25UP	0.268788	0.268932	0.000144	0.05%
Total households, \$50,000-74,999 income	m	HH50UP	0.143774	0.143921	0.000147	0.10%
Total households, \$75,000-99,999 income	m	HH75UP	0.063595	0.063667	0.000072	0.11%
Total households, \$100,000 income and up	m	HH100UP	0.063040	0.063153	0.000112	0.18%
Income and Output						
Labor earnings, nominal	\$bn	YLABOR	52.456019	52.501227	0.045208	0.09%
Capital earnings, nominal	\$bn	YKAPIT	21.424492	21.441586	0.017094	0.08%
Real Gross State Product	\$bn	STATEGSP	78.972133	79.125213	0.153079	0.19%
Real GSP per capita	'000	STGSPCAP	28.714142	28.776010	0.061868	0.22%
State personal income	\$bn	STATESPI	83.387214	83.284523	(0.102691)	-0.12%
Real disposable income	\$bn	RYD	64.743303	64.740212	(0.003091)	0.00%
Real disposable income, <\$25,000 income	\$bn	RYDLE25	9.326802	9.217863	(0.108940)	-1.17%
Real disposable income, \$25,000-49,999 income	\$bn	RYD25UP	13.377131	13.382128	0.004997	0.04%
Real disposable income, \$50,000-74,999 income	\$bn	RYD50UP	13.163732	13.185078	0.021347	0.16%
Real disposable income, \$75,000-99,999 income	\$bn	RYD75UP	7.263121	7.277817	0.014696	0.20%
Real disposable income, \$100,000 income and up	\$bn	RYD100UP	21.612516	21.677325	0.064808	0.30%
Real disposable income/capita, overall	'000	RYDCAPIT	23.540562	23.544518	0.003956	0.02%
Real disposable income/capita, <\$25,000 income	'000	RYDLE25C	6.703778	6.634018	(0.069759)	-1.04%
Real disposable income/capita, \$25,000-49,999 income	'000	RYD25UPC	19.745915	19.742712	(0.003204)	-0.02%
Real disposable income/capita, \$50,000-74,999 income	'000	RYD50UPC	36.326498	36.348227	0.021729	0.06%
Real disposable income/capita, \$75,000-99,999 income	'000	RYD75UPC	45.313446	45.353768	0.040322	0.09%
Real disposable income/capita, \$100,000 income and up	'000	RYD100UPC	136.022423	136.187849	0.165426	0.12%
Government Revenue and Taxation						
US federal personal income tax collections	\$bn	USPITX	9.866050	9.862040	0.005991	0.06%
Kansas sales tax	\$bn	STSATX	1.979968	1.837024	(0.142944)	-7.22%
Kansas tax on motor fuel	\$bn	STFUTX	0.384374	0.384358	(0.000016)	0.00%
Kansas tax on motor vehicle	\$bn	STMOTX	0.123491	0.123501	0.000010	0.01%
Kansas corporate income tax	\$bn	STCITX	0.252886	0.253107	0.000220	0.09%
Kansas mineral tax	\$bn	STMNTX	0.083066	0.083148	0.000082	0.10%
Kansas personal income tax	\$bn	STPITX	2.158331	2.160293	0.001961	0.09%
Kansas cigarette and tobacco tax	\$bn	STTCTX	0.149900	0.150650	0.000750	0.50%
Local tax on residential property	\$bn	LOPRTX	1.792828	1.793493	0.000664	0.04%
Local tax on business property	\$bn	LOPBTX	1.225865	1.227461	0.001596	0.13%
Investment, Wages, Prices, and Trade						
Net investment	\$bn	INVEST	12.845354	12.854007	0.008653	0.07%
Capital stock	\$bn	KD	122.772319	122.781709	0.009390	0.01%
Wage rate index	Index	W	100.000000	99.984695	(0.015305)	-0.02%
Rate of return on capital index	Index	R	100.000000	100.077738	0.077738	0.08%
Domestic demand	\$bn	DD	121.739169	121.760844	0.021675	0.02%
Intermediate demand	\$bn	V	45.267856	45.307625	0.039769	0.09%
Private consumption	\$bn	CH	57.137232	57.095122	(0.042111)	-0.07%
Government purchases	\$bn	CG	6.855621	6.861202	0.005581	0.08%
Investment demand	\$bn	CN	12.478459	12.496895	0.018436	0.15%
Imports	\$bn	IMPORTS	66.812192	66.765408	(0.046783)	-0.07%
Exports	\$bn	EXPORTS	50.991305	51.028508	0.037203	0.07%
CPI for households, <\$25,000 income	Index	CPILE25	1.000000	0.998450	(0.001550)	-0.15%
CPI for households, \$25,000-49,999 income	Index	CPI25UP	1.000000	0.998369	(0.001631)	-0.16%
CPI for households, \$50,000-74,999 income	Index	CPI50UP	1.000000	0.998338	(0.001662)	-0.17%
CPI for households, \$75,000-99,999 income	Index	CPI75UP	1.000000	0.998336	(0.001664)	-0.17%
CPI for households, \$100,000 income and up	Index	CPI100UP	1.000000	0.998409	(0.001591)	-0.16%

Employment by sector, thousands	'000	TOTAL	1489.472	1491.354	1.883	0.13%
Agriculture forestry and fishing	'000	AGRICF	82.308336	82.395849	0.087513	0.11%
Mining	'000	MINING	12.574758	12.593129	0.018371	0.15%
Construction	'000	CONSTR	91.302753	91.495920	0.193166	0.21%
Food and food processing	'000	FOODPR	26.642845	26.653309	0.010464	0.04%
Alcohol	'000	ALCOOL	0.098272	0.098507	0.000235	0.24%
Apparel and clothing	'000	APPARL	3.690771	3.698897	0.008126	0.22%
Building materials and furniture	'000	MFRCON	20.527695	20.556146	0.028451	0.14%
Paper and publishing	'000	PPAPER	23.093910	23.122331	0.028421	0.12%
Chemicals rubber plastics	'000	CHEMIC	16.415469	16.436928	0.021459	0.13%
Petroleum refining	'000	PETROL	0.815556	0.816466	0.000910	0.11%
Electronic and electrical equipment	'000	ELECTR	4.213537	4.221853	0.008316	0.20%
Motor vehicles	'000	MOTORV	7.591255	7.606325	0.015070	0.20%
Aircraft and space industry	'000	AEROSP	40.351276	40.392859	0.041582	0.10%
Other manufacturing	'000	MFROTH	30.934391	30.985089	0.050698	0.16%
Transportation	'000	TRANSP	42.948898	42.978362	0.029464	0.07%
Communications	'000	COMMUN	18.043542	18.070471	0.026930	0.15%
Electricity gas sanitary	'000	UTILIT	7.112053	7.118817	0.006764	0.10%
Wholesale trade	'000	WHOLSA	65.775346	65.830019	0.054673	0.08%
Retail trade	'000	RETAIL	235.630826	236.713312	1.082486	0.46%
Banking	'000	BANKNG	33.852157	33.842046	(0.010110)	-0.03%
Insurance	'000	INSURS	29.649764	29.653347	0.003583	0.01%
Real estate	'000	REALST	24.339026	24.336020	(0.003006)	-0.01%
Personal services	'000	PERSVC	25.161674	25.156269	(0.005405)	-0.02%
Repair services	'000	REPSVC	18.089132	18.114994	0.025863	0.14%
Business services	'000	BSVCES	143.690825	143.818209	0.127384	0.09%
Hotels amusements motion pictures entertainment	'000	ENTRHO	32.238268	32.285718	0.047451	0.15%
Health services	'000	HEALTH	100.169518	100.000875	(0.168643)	-0.17%
Education services	'000	EDUCAT	22.185148	22.194496	0.009349	0.04%
Other services	'000	OTHSVC	54.305894	54.293207	(0.012687)	-0.02%
Governments	'001	GOV	275.718693	275.874533	0.155840	-

Net investment by sector	\$m	TOTAL	12.845	12.854	0.009	0.07%
Agriculture forestry and fishing	\$m	AGRICF	1.351818	1.352741	0.000923	0.07%
Mining	\$m	MINING	0.847822	0.848654	0.000831	0.10%
Construction	\$m	CONSTR	0.243726	0.244085	0.000359	0.15%
Food and food processing	\$m	FOODPR	0.174253	0.174284	0.000031	0.02%
Alcohol	\$m	ALCOOL	0.000509	0.000510	0.000001	0.17%
Apparel and clothing	\$m	APPARL	0.026304	0.026345	0.000040	0.15%
Building materials and furniture	\$m	MFRCON	0.123634	0.123749	0.000114	0.09%
Paper and publishing	\$m	PPAPER	0.399125	0.399448	0.000322	0.08%
Chemicals rubber plastics	\$m	CHEMIC	0.264126	0.264355	0.000229	0.09%
Petroleum refining	\$m	PETROL	0.021616	0.021631	0.000016	0.07%
Electronic and electrical equipment	\$m	ELECTR	0.073281	0.073381	0.000100	0.14%
Motor vehicles	\$m	MOTORV	0.115218	0.115376	0.000158	0.14%
Aircraft and space industry	\$m	AEROSP	0.416506	0.416780	0.000274	0.07%
Other manufacturing	\$m	MFROTH	0.303617	0.303955	0.000338	0.11%
Transportation	\$m	TRANSP	1.896180	1.896938	0.000758	0.04%
Communications	\$m	COMMUN	0.773592	0.774369	0.000777	0.10%
Electricity gas sanitary	\$m	UTILIT	2.186239	2.187547	0.001308	0.06%
Wholesale trade	\$m	WHOLSA	0.624118	0.624436	0.000317	0.05%
Retail trade	\$m	RETAIL	0.671797	0.674033	0.002236	0.33%
Banking	\$m	BANKNG	0.338639	0.338524	(0.000115)	-0.03%
Insurance	\$m	INSURS	0.320030	0.320022	(0.000008)	0.00%
Real estate	\$m	REALST	0.798084	0.797919	(0.000166)	-0.02%
Personal services	\$m	PERSVC	0.034791	0.034781	(0.000010)	-0.03%
Repair services	\$m	REPSVC	0.067090	0.067154	0.000064	0.10%
Business services	\$m	BSVCES	0.248242	0.248378	0.000137	0.05%
Hotels amusements motion pictures entertainment	\$m	ENTRHO	0.046871	0.046918	0.000046	0.10%
Health services	\$m	HEALTH	0.277251	0.276869	(0.000382)	-0.14%
Education services	\$m	EDUCAT	0.023062	0.023066	0.000005	0.02%
Other services	\$m	OTHSVC	0.177813	0.177761	(0.000052)	-0.03%